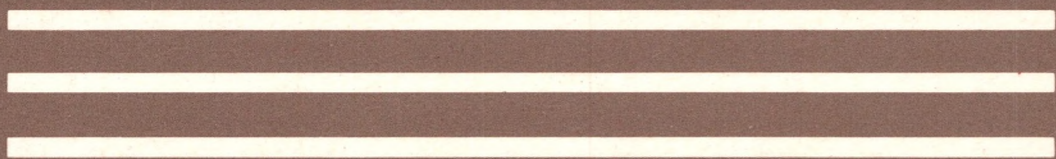


**Enhanced 101/102-Key
Keyboard
Installation Guide**



Honeywell Bull

ENHANCED 101/102-KEY KEYBOARD INSTALLATION GUIDE

SUBJECT

Installing and Using the Honeywell Bull PC Enhanced Keyboard

The following notice is provided in accordance with the United States Federal Communications Commission's (FCC) regulations.

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna

- Relocate the computer with respect to the receiver

- Move the computer away from the receiver

- Plug the computer into a different outlet so that computer and receiver are on different branch circuits.

If necessary, the user should consult the seller or an experienced radio/television technician for additional suggestions.

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USER COMMENTS FORMS are included at the back of this manual. These forms are to be used to record any corrections, changes, or additions that will make this manual more useful.

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Honeywell Bull disclaims the implied warranties of merchantability and fitness for a particular purpose and makes no express warranties except as may be stated in its written agreement with and for its customer.

In no event is Honeywell Bull liable to anyone for any indirect, special or consequential damages. The information and specifications in this document are subject to change without notice. Consult your Honeywell Bull Marketing Representative for product or service availability.

IMPORTANT SAFETY INSTRUCTIONS

Follow these instructions to operate the product safely.

1. Read all these instructions.
2. Save these instructions for later use.
3. Follow all warnings and instructions marked on the product.
4. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
5. Do not use this product near water.
6. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
7. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register. This product should not be placed in a built-in installation unless proper ventilation is provided.
8. This product should be operated from the type of power source indicated on the marking label. If you are unsure of the type of power available, consult your Honeywell Bull Representative or local power company.
9. This product is equipped with a 3-wire grounding type plug, a plug having a third (grounding) pin. This plug fits into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the purpose of the grounding-type plug.
10. Do not permit anything to rest on the power cord. Do not locate this product where persons walk on the cord.
11. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
12. Never push objects of any kind into this product through cabinet slots. They may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.
13. Except as explained elsewhere in this manual, do not attempt to service this product yourself. Opening or removing those covers that are marked "Do Not Remove" may expose you to dangerous voltage points or other risks. Refer all servicing in those compartments to service personnel.

14. Unplug this product from the wall outlet, and refer servicing to qualified service personnel under the following conditions:
- When the power cord or plug is damaged or frayed.
 - If liquid has been spilled into the product.
 - If the product has been exposed to rain or water.
 - If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and often requires extensive work by a qualified technician to restore the product to normal operation.
 - If the product has been dropped or the cabinet has been damaged.
 - If the product exhibits a distinct change in performance, indicating a need for service.

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Section 1 INSTALLING THE KEYBOARD

In this section:	See page
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Summary This section describes how to install the keyboard.

SETTING THE SWITCH CONFIGURATION ON THE KEYBOARD

The enhanced keyboard is equipped with a four-position Dual Inline Package (DIP) switch that is located on the bottom of the keyboard near the cable connector. This switch gives you the option to:

- Choose between XP and AP/SP Series operation
- Receive audio feedback when you press a key
- Duplicate the operation of an enhanced AT keyboard.

Before you power on the keyboard, you must make the following switch settings:

SW1 (ON) = NO ENHANCED CODES (EOH PREFIX REMOVED)

SW1 (OFF) = ENHANCED CODES

SW2 (ON) = CLICKER ENABLED

SW2 (OFF) = CLICKER DISABLED

SW3 (OFF) = ALWAYS OFF

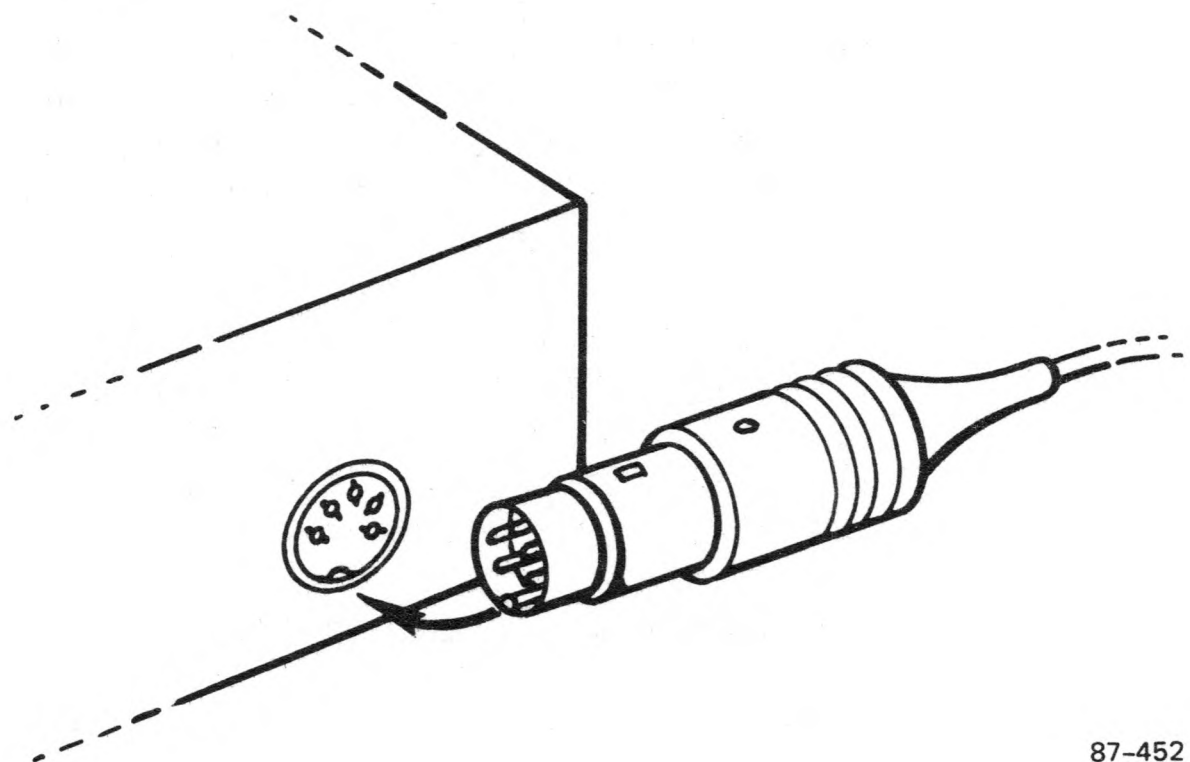
SW4 (ON) = PC XP INTERFACE SELECTED (9-BIT FORMAT)

SW4 (OFF) = PC AP/SP INTERFACE SELECTED (11-BIT FORMAT)

CONNECTING THE KEYBOARD TO THE CONTROL UNIT

To connect the keyboard to the control unit, use the following procedure.

1. Power off the PC and any peripheral units (such as printers and monitors).
2. Remove the power cord plug from the power source.
3. Position the computer so that you can work easily with the back of the control unit.
4. Find the keyboard socket on the computer. The socket is round, and resembles the illustration in Figure 1-1. The socket is notched to enable proper attachment of the keyboard plug. The location of the socket varies according to the PC.



87-452

Figure 1-1. Keyboard Socket

5. Align the plug so that the notch and groove match, and the pins fit the pin receiving holes. Slide the plug into the socket until it can move no further.
6. Reconnect the power cable.
7. Power up the PC and peripherals and test the keyboard.

ADJUSTING THE KEYBOARD ANGLE

Adjust the tilt angle of the keyboard by using finger pressure to move the adjustable feet (located on the bottom of the keyboard case). The keyboard is delivered with the feet in a retracted position.

DIAGNOSTIC TESTING

Your PC may have diagnostic tests for the keyboard. Use the tests to verify that the keyboard functions properly before you attempt to do any work.

MINIMIZING RADIO INTERFERENCE

Computer equipment generates and uses radio frequency energy which can be received by televisions, FM stereos, radios, and other computer equipment. Evidence of radio frequency interference (RFI) is whining, buzzing, or hissing sounds on audio systems and "snow" or other patterns on video screens.

The keyboard meets FCC standards when it is installed according to the instructions in this manual. However, environmental differences may allow RFI to occur. If RFI occurs, you can try to correct the situation by:

- Changing the aim of the receiving antenna
- Relocating the computer with respect to the receiver
- Moving the computer away from the receiver
- Separating the computer and receiver if they are on the same electrical circuit.

The booklet, *How to Identify and Resolve Radio-TV Interference Problems*, (available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-00345-4) may be of help.

SERVICING

Refer to the Fact Folder included with your Honeywell Bull PC for warranty and service information.

Section 2

KEYBOARD FUNCTIONS

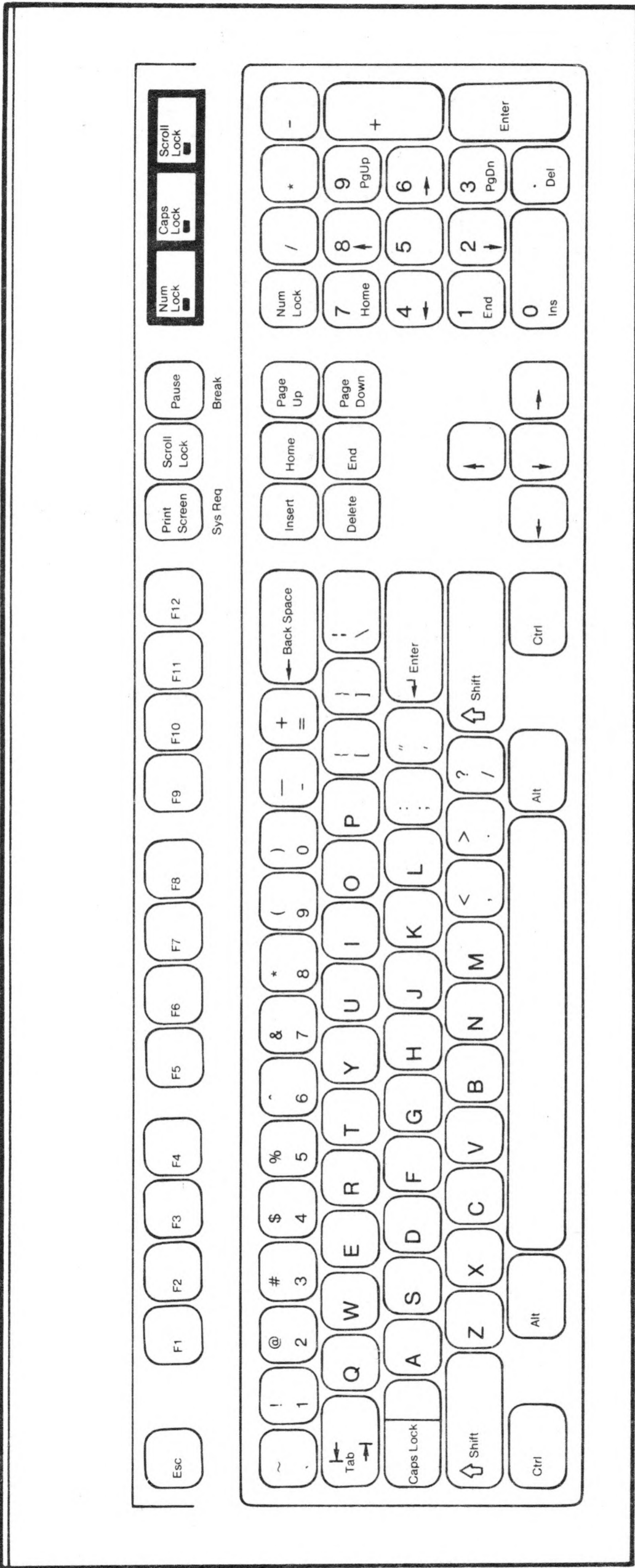
In this section:	See page
Features of the Enhanced Keyboard.....	2-2
Functions of Special Keys.....	2-4

Summary This section describes keyboard features and functions. Consult the user guides supplied with your computer programs for actual use of the keyboard.

FEATURES OF THE ENHANCED KEYBOARD

The enhanced keyboard (see Figure 2-1) includes the following features:

- Keys repeat when held down.
- The NUM LOCK key lights when the feature is on; when on, the keys in the numeric keypad display as numeric values; when off, the keys have cursor control functions.
- The CAPS LOCK key also lights when the function is on; when the function is active, keys in the typewriter portion of the keyboard (excluding the keys in the top row) display in uppercase. The shift keys are then used to obtain lowercase characters. When the function is off, the shift keys are used to obtain uppercase characters and the normal display of characters is lowercase.
- An n-key rollover feature allows additional keys to be pressed before previously pressed keys are released.
- The keys labeled Print Screen, Scroll Lock, Pause/Break, Alt, Esc, Ctrl, and F1 through F12 are under program control as is the TAB key.
- Enlarged manual shift keys (indicated by up arrows) are provided for typing convenience.
- An enlarged Enter key is provided for typing convenience.
- Cursor control keys in the numeric keypad are under program control.



87-453

Figure 2-1. Enhanced Keyboard

Keyboard Functions

- Several functions from the numeric keypad appear in the Cursor Movement Keypad for additional convenience. The functions that have segregated, discrete keys are:
 - Delete character
 - Page up
 - Move cursor up
 - Move cursor right
 - Go to end of line
 - Move cursor to HOME display position
 - Insert character
 - Page down
 - Move cursor down
 - Move cursor left.
- Second control and Alt keys provide added convenience.

FUNCTIONS OF SPECIAL KEYS

Tables 2-1 and 2-2 describe frequent uses for the keys.

Table 2-1. Special Keys (Sheet 1 of 3)

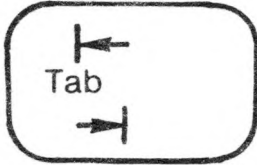
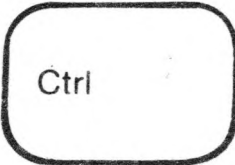
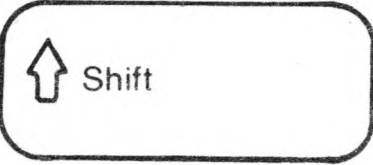
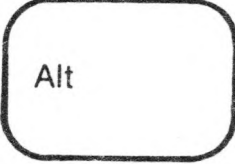
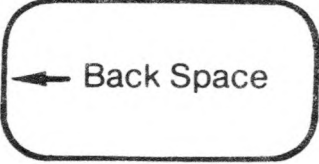
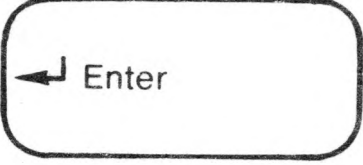
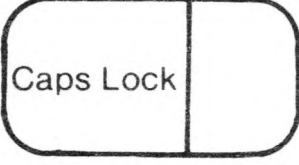
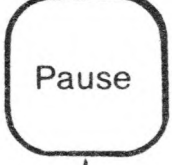
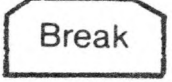

Key	Function	Notes
	Moves cursor to tab positions.	
	Accesses control key functions.	Key is pressed and held while second key is pressed.
	Accesses shifted key functions.	Key is pressed and held while second key is pressed.
	Accesses alternate key functions.	Key is pressed and held while second key is pressed.
	Moves cursor one character to the left with each stroke.	Erases characters at cursor position.
	Moves cursor from end of one line to beginning of next. Also used to enter commands.	Also called Carriage Return. Sometimes appears in print as CR.
	Locks alpha keyboard in uppercase mode.	Does not access shifted modes of keys.
	Temporarily suspends operation of program in use.	Pause function.
	Used with Ctrl key.	Break function.
	Controls use of numeric keypad.	See Table 2-2.

Table 2-1. Special Keys (Sheet 2 of 3)

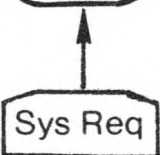
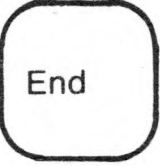
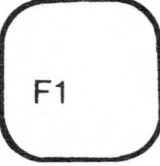
Key	Function	Notes
Esc	Escapes from the structure of a program.	
Scroll Lock	Freezes scrolling information on screen.	When pressed with Ctrl, is Break key.
Print Screen	Under program control; normally used for host telecommunications.	Print screen function.
 Sys Req	Used with Alt key.	Sys Req function.
-	Indicates negative numeric.	
+	Indicates positive numeric.	
Page Up	Displays next page of text or program. Not active in MS-DOS.	
Delete	Deletes portions of text.	
Insert	Activates and deactivates "Insert Mode."	
Page Down	Displays previous page of text or program. Not active in MS-DOS.	

Table 2-1. Special Keys (Sheet 3 of 3)

Key	Function	Notes
  F1-F12	<p>Moves cursor to last character in the line.</p> <p>Function keys. Can be programmed for use:</p> <ul style="list-style-type: none">● By themselves.● In conjunction with the shift keys.● In conjunction with Ctrl.● In conjunction with Alt.	

Keyboard Functions

Table 2-2. Key Functions When Used With Num Lock

Key	Num Lock On	Num Lock Off
0 Ins	0 displays on screen.	Allows characters to be inserted at current cursor position.
1 End	1 displays on screen.	Moves cursor to test position of current line.
2 ↓	2 displays on screen.	Moves cursor to last position of current line.
3 PgDn	3 displays on screen.	Displays next page of text or program. (Not active in MS-DOS.)
4 ←	4 displays on screen.	Moves cursor one position to left. Does not delete.
6 →	6 displays on screen.	Moves cursor one character to right of current position. Does not delete.
7 Home	7 displays on screen.	Returns cursor to top left of screen.
8 ↑	8 displays on screen.	Moves cursor to same column one line up.
9 PgUp	9 displays on screen.	Displays previous page of text or program. (Not active in MS-DOS.)
. Del	Decimal point displays on screen.	Deletes character at current cursor position.

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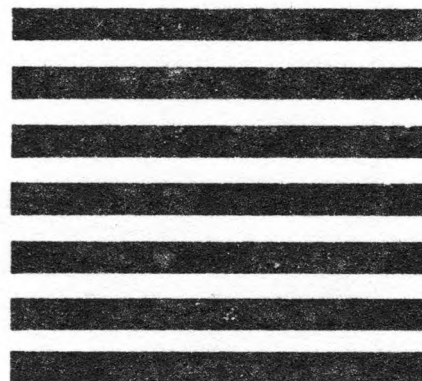
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